

S/N 10/711,818 Proposed Amendments

Please amend claim 1. Please cancel claims 2-30. The claims are as follows:

1. (Currently) A method of sputter deposition, comprising:

providing a sputter target assembly, said sputter target assembly including:

an electrically conductive solid circular sputter target having a back surface and an exposed front surface and comprised of a first material, said sputter target having inner and outer annular circular slots open to said bottom surface;

providing a source of magnetic field lines, said magnetic field lines extending through said sputter target from said back surface to said exposed front surface of said sputter target;

providing one or more pole extenders between magnetic poles of said source of said magnetic field lines and said exposed front surface of said sputter target;

an electrically conductive solid circular backing plate having a back surface and a front surface and comprised of a non-magnetic second material, a perimeter of said backing plate positioned over a perimeter of said sputter target, said front surface of said backing plate in physical and electrical contact with said back surface of said sputter target;

inner and outer ring shaped pole extenders positioned and contained entirely in respective said inner and outer slots in said sputter target, said pole extenders comprised of a magnetic third material; and

a protective coating on all surfaces of said pole extenders said protective coating preventing chemical or galvanic reaction between and first and second materials and said third material;

placing said sputter target assembly over a magnet assembly, said magnet assembly comprising:

an outer set of bar magnets having first and second poles and mounted equidistant from each other in a circle proximate to a perimeter of a mounting plate, first poles of each magnet of said outer set of magnetic positioned facing said mounting plate; and

an inner set of bar magnets having first and second poles and mounted equidistant from each other in a circle between said outer set of magnets and a geometric center of said mounting plate, second poles of each magnet of said inner set of magnets positioned facing said mounting plate, said first poles of said inner and outer sets of magnets being the same magnetic polarity and said second poles of said inner and outer sets of magnets being the same magnetic polarity and opposite from said first polarity;

aligning said outer set of magnets under said outer pole extender and aligning said inner set of magnets under said inner pole extender, an axis passing through a geometric center of said sputter target assembly co-axially aligned with an axis passing through said geometric center of said mounting plate, second poles of each magnet of said outer set of magnetic positioned facing said outer pole extender and first poles of each magnet of said inner set of magnetic positioned facing said inner pole extender; and

rotating said magnet assembly about an axis parallel to and perpendicularly offset from said axis passing through said geometric center of said magnet assembly.